

Date: Sun, 14 Aug 94 04:30:08 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #260
To: Ham-Ant

Ham-Ant Digest Sun, 14 Aug 94 Volume 94 : Issue 260

Today's Topics:

 ??Loop or dipole ..BEST??
 Aluminum suppliers...
Bonehead: How do you tune an antenna with a noise bridge?
 crank up towers
 Ever see a black tribander?
 Information on GAP
 Question on FM broadcasts...
Should feedline lenght change the VSWR? (2 msgs)
 Temperature Telemetry
 tunor humor

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 10 Aug 1994 18:36:00 GMT
From: ihnp4.ucsd.edu!mvb.saic.com!unogate!news.service.uci.edu!usc!
howland.reston.ans.net!usenet.ins.cwru.edu!news.csuohio.edu!vmcms.csuohio.edu!
R0264@network.ucsd.edu
Subject: ??Loop or dipole ..BEST??
To: ham-ant@ucsd.edu

In article <CuA9p6.6EC@nrd.ups.com>
nrd1pxm@nrd.ups.com (Peter Martin Contractor) writes:

>
>I'm sure the folded dipole is simple, but where do I find how to make one?
>

>--

>=====

>Peter Martin	UPS	Danbury, CT	(203) 731-6324	nrd1pxm@nrd.ups.com
>Real Life Home:		Kent, WA	(206) 631-5478	

>SCCA '83 Mazda RX7 #24 ITA '91 ragtop WD9HAD

Roughly: Get some twin lead antenna feedline. Cut a piece 1/2 wavelength. In the middle of that, cut just one of the conductors, and that will be the feedpoint. Connect the two conductors out on each end. That is the antenna, except for some optional improvements shown in a recent issue of the ARRL Handbook. Also, the length will need to be trimmed a bit probably for resonance at the operating frequency. It is supposed to be pretty broad-banded though, so the tuning should not be very critical. The feed-point impedance is high, about 200 ohms, so a 4:1 balun might be used for feeding with coax, or it seems you could feed with twin lead all the way down to your antenna tuner. -- Phil Emerson.

Date: 13 Aug 1994 00:05:01 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: Aluminum suppliers...
To: ham-ant@ucsd.edu

In article <CuC45D.Iw6@spk.hp.com>, depaul@spk.hp.com (Marc DePaul) writes:

Unless you have to have brand spanking new aluminum you may want to try a scrapyard ,aka metal recyclers or salvage yards.The one in my area, san diego, carries about any metal you could want.Most of it it clean with little oxidation.Were talking longer lengths too not itty bitty shorts.You can save big \$\$\$\$ this way too!

Lou Wasmund
"still checking the mailbox"

Date: Mon, 8 Aug 1994 08:58:36 GMT
From: agate!howland.reston.ans.net!math.ohio-state.edu!magnus.acs.ohio-state.edu!csn!yuma!jl198183@ames.arpa
Subject: Bonehead: How do you tune an antenna with a noise bridge?
To: ham-ant@ucsd.edu

In article <Cu2Hu9.KMz@ncrcae.ColumbiaSC.NCR.COM> Tom.Skelton@ClemsonSC.NCR.COM writes:

>>In article <CtyzA0.BFp@wrs.com> Jerald Pendleton writes:
>>I may be displaying extreme ignorance here but....

>>
>>I've been told that some hams use a noise bridge to tune their antenna
>>using a transmatch. This has the advantage of not generating qrm while
>>you get the antenna to resonance.
>>
>>How the heck do you do that?
>>
>>[...]
>That's a good question, and was the basis (I think) of the "tuner tuner" that
>was
>put out by Palomar Engineers. Here's the setup:
>Attach your antenna to the 'output/antenna' of your tuner. Connect the 'input'
>of your tuner to the "unknown" port/S0239 of the noise bridge. Connect the
>"rcvr"
>S0-239 to your receiver/transceiver.
>
>Now, turn on the noise bridge and set the R (resistance) scale to 50 ohms and
>set the Xc/Xl scale to 0 (zero). You should hear a rushing sound in your
>receiver/transceiver. Adjust your tuner (leave the noise bridge alone) until
>the noise in the receiver/transceiver is nulled. Your transceiver is now seeing
>a 50 ohm match provided by your tuner. You can do this for any band you want to
>operate, make up a chart, and basically set-and-forget unless you change your
>antenna
>dimensions.
>
>MAJOR OBVIOUS WARNING: DO NOT TRANSMIT INTO THE
>NOISE BRIDGE.
>
>I hope this helps. cheers...
>
>
>73, Tom WB4iUX
>My posting is my view only and not AT&T's. But you know that!
>DX IS !!!!!
>And always will be.....
>
>
So, is the "Tuner Tuner" from Palomar just a noise bridge? Thanks in advance
for a reply.

Jeff, KB0FIX

--

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-----  
| Jeffrey A. LeBlanc                | In the immortal words of Socrates:  
| jl198183@longs.lance.colostate.edu | "I drank what?!"  
-----
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Date: 13 Aug 94 18:56:28 GMT
From: news-mail-gateway@ucsd.edu
Subject: crank up towers
To: ham-ant@ucsd.edu

I had one of my coax arms on an older Wilson crank up tower
break off. I now have the tower down for repairs and would
like comments/ideas on replacing this coax arm - or other systems
for supporting , holding the coax on a crank up tower. THANKS!

--

73

=====
Robert Wood
WB5CRG
w5robert@blkbox.com (blkbox is NOT blackbox, inc.!)
w5robert@blkbox.com@menudo.uh.edu
=====

Date: Sat, 13 Aug 94 13:50:59 EDT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!overload.lbl.gov!agate!usenet.ins.cwru.edu!
eff!wariat.org!malgudi.oar.net!hypnos!voxbox!jgrubs@network.ucsd.edu
Subject: Ever see a black tribander?
To: ham-ant@ucsd.edu

rkarlqu@scd.hp.com (Richard Karlquist) writes:

> In article <32dr8t\$mkj@news.udel.edu>,
> Dave Dabell <dave@diusys.cms.udel.edu> wrote:
> >Pete Rossi (rossi@VFL.Paramax.COM) wrote:
> >: After one of the big ice storms that hit here last winter, everything was
> >: coated with 1/4" of ice but when the sun came out the next morning, all of
> >: ice on the BLACK COAX connected to my wire antennas was gone(!) within a c
> >: hours. But the ice on the trees, wires, shiny aluminum tubing and most
> >: everything else stayed around for 2 days! So I am thinking of spray paint
> >: any future wire and aluminum that goes in the air FLAT BLACK to help melt
> >73, Dave WA3U
>
> You have to make sure you use a paint that is black at infrared wavelengths
> to get the optimum effect. Some kinds of paint are much better than others,
> regardless of them all being black in the visible range.

What about painting it with black liquid vinyl?

--

jgrubs@voxbox.norden1.com

'Two of the gravest general dangers to survival are the desire for comfort and a passive outlook.' -- U.S. Army Ranger Handbook

Date: Fri, 12 Aug 1994 13:02:21 GMT
From: ihnp4.ucsd.edu!news.cerf.net!gopher.sdsc.edu!nic-nac.CSU.net!
charnel.ecst.csuchico.edu!yeshua.marcam.com!hookup.nic.ott.hookup.net!takeone!
jacques.choquette@network.ucsd.edu
Subject: Information on GAP
To: ham-ant@ucsd.edu

YES. Quick! rush out and get one. I've had one for ongoing 2 years plus I know 2 other people who have them. nil, I say again, NIL problems in use. WE just put up, guyed it down (required unless you live in the middle of a no-wind zone) and started xmitting. Great on both HF and 2M. No adjustmeints, no tuning. Recntly bought an R7 and it does have better gain from 20M and up (sometimes 2-3 S units) but have had problems in matching and putting to proper resonationg lenghts. Also for the extra gain you get VERY decreased bandwidth.

The Gap is within 2:1 SWR over its whole frequency range except 80M. Here due to size order it with the SWR in the area you like to operate. Once out of bandwidth a tuner is required. Other than that love it. Hope the above helped you, VE3TSC.

Date: Sun, 7 Aug 94 17:00:00 -0800
From: olivea!charnel.ecst.csuchico.edu!nic-nac.CSU.net!csulb.edu!
paris.ics.uci.edu!news.claremont.edu!kaiwan.com!ledge!bob.albert@ames.arpa
Subject: Question on FM broadcasts...
To: ham-ant@ucsd.edu

The FCC has a band plan for the FM broadcast band that assigns channels every 200 kHz, on odd decimal frequencies. So there are no stations on the even numbers.

73 DE K6DDX

Date: 13 Aug 1994 05:06:18 GMT
From: ihnp4.ucsd.edu!news.cerf.net!gopher.sdsc.edu!nic-nac.CSU.net!
charnel.ecst.csuchico.edu!yeshua.marcam.com!news.kei.com!ssd.intel.com!chnews!
scorpion.ch.intel.com!cmoore@network.ucsd.edu
Subject: Should feedline lenght change the VSWR?

To: ham-ant@ucsd.edu

I'm sorry, but I reformatted the original posting and lost the author.

>So I called Company "G" and spoke to
>their tech support person and he told me that one should not
>measure the VSWR at the antenna.

He is probably right. Your analyzer is probably affected by the near field of the antenna and will give bad readings especially if it has a microcomputer in it. (I'm a microcontroller jock).

>and that the VSWR would change depending on the length of the feed line.

He's right again. No matter what the SWR is at the antenna, if you make your coax long enough, the SWR at the generator will be close to 1/1.

>This isn't how I understood things worked from reading Walter Maxwell's
>book "Reflections" but maybe I missed something.

Never, never, never assume that coax is lossless no matter what anybody says. Learn when transmission line losses matter and when they don't. Every transmission line, no matter how long or short and no matter how high the quality, has losses!!! Even 100 ft of 450 ohm ladder-line has measurable losses on 80m (but much, much less than coax).

On 440 MHz with 200 ft of RG-58, your SWR will be less than 1.1/1 with no antenna attached or with the coax shorted at the load end.

I don't know a thing about that particular antenna but sounds like they are depending on the losses in the coax and the transformer characteristics of the transmission line to give a reasonable match at the generator.

73 and good luck, Cecil, KG7BK, 00TC (Not speaking for Intel)

--

Intel, Corp.
5000 W. Chandler Blvd.
Chandler, AZ 85226

Date: 13 Aug 1994 20:12:01 -0400

From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net

Subject: Should feedline length change the VSWR?

To: ham-ant@ucsd.edu

In article <32ht1s\$ch8@chnews.intel.com>, Cecil_A_Moore@ccm.ch.intel.com writes:

>Your analyzer is probably affected by the near
>field of the antenna and will give bad readings especially if it has a
>microcomputer in it. (I'm a microcontroller jock).

I am curious why the fact that the RF Analyst has a
microprocessor in it would affect the accuracy?

>He's right again. No matter what the SWR is at the antenna, if you
>make your coax long enough, the SWR at the generator will be close
>to 1/1.

>The SWR changes every inch up and down the transmission line because
every
>inch has a finite loss and because the SWR is never exactly 1/1 at the
>load. _For practical purposes_ if the transmission line is matched
>to the load the SWR is close enough to 1/1. If the transmission line is
>not matched to the load, the SWR decreases in the direction toward the
>generator because of losses. Removing an inch of transmission line
>changes the SWR... inserting an SWR meter changes the SWR... hopefully
>by a negligible amount.

I agree with you that there will be some loss in the coax and that
it will cause the VSWR reading in the shack to be lower than at the
antenna. I guess I didn't word that part very well. What I was
trying to understand is the fact that I read a VSWR at the antenna
on 14.200 MHz of 4.3 - 1 and in the shack it reads 1.5 while on
21.200 I read 2,1 - 1 at the antenna and 2.4 - 1 in the shack?
The gentleman at the store told me this is normal and I need to cut
the coax feed to 65 feet and then the VSWR curves would fall in
place as the VSWR varies up and down with length. At least that
is what I thought he said.

Thanks for taking the time to reply, it is appreciated!

Cheers, Terry KJ7F

These are not the opinions of my employee, I have enough trouble having
my own!

Date: Thu, 11 Aug 1994 20:55:50 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!vixen.cso.uiuc.edu!
newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!osuunx.ucc.okstate.edu!biosun!
gcouger@network.ucsd.edu
Subject: Temperature Telemetry
To: ham-ant@ucsd.edu

An inexpensive way to do this would be to charge a capacitor in the oscillator from a microwave source for power. And put an ordinary silicon diode in the frequency determining portion of the oscillator. They change capacitance with temperature. You will have to calibrate each device as all the parts change values with temperature.

A much simpler way would be to put a precision thermistor in the box and bring the leads out and just plug in and read the resistor. If you chose this method you need to standardize the time you apply current to the resistor before you measure the temperature as the resistor will heat up when you apply current to it.

Good luck
Gordon

In article <1994Aug11.192415.1@uctvax.uct.ac.za>,
<oflber02@uctvax.uct.ac.za> wrote:
>I am currently doing a thesis on a Perishable Goods Temperature Monitor.
>The thesis calls for a temperature probe which is packed with the goods.
>An interrogator then interrogates the probe and a reading is given.
>The problem is that the probe is not allowed to have a power source at all.
>The interrogator is hand-held and is powered by a battery. An option is
>to have a rechargeable set up.
>The probe must be as light as possible and as small as possible.
>The system must be able to read temperatures between 233K and 313K
>with an accuracy of 0.5K
>I have thought about using a telemetry system or a transponder.
>I have thought about using magnetic, acoustic, RF or microwave coupling
>but I do not think I will be able to get enough power from a meter away
>to power a IC like the LM35.
>The interrogator must be able to receive the temperature from a meter away.
>The only thing I have thought of that might work is an oscillating circuit.
>The oscillation frequency changes with temperature.
>A dip meter is then used as the interrogator.
>The only problem is that the only thing I can think of that will vary with
>temperature is a bimetallic strip.
>The strip can then be used to change the capacitance of the oscillating
>circuit.
>However I need a circuit for a dip meter which can constantly scan the
>frequency range and be able to differentiate the dips so that the required
>accuracy is obtained.

>Any help or ideas and suggestions are needed and very welcome.
>Please send mail to
>ooflber02@uctvax.uct.ac.za
>Thanks in advance
>Bernard O'Flynn
>Dept. of Electrical Engineering
>University of Cape Town

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gcouger@olesun.agen.okstate.edu 405-744-9763 day 624-2855 evenings
I do not speak for my employer

Date: 12 Aug 1994 19:53:45 GMT
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!gatech!
newsxfer.itd.umich.edu!zip.eecs.umich.edu!yeshua.marcam.com!news.kei.com!
ssd.intel.com!chnews!scorpion@ihnp4.ucsd.edu
Subject: tunor humor
To: ham-ant@ucsd.edu

Here's a quote from an antenna tuner advertisment in Aug. CQ:

"An automatic antenna coupler so intelligent it precisely tunes any
length antenna -8 to 80ft-in the HF band."

Where the heck can I mount a -8 ft long antenna?... and how long is
80 ft-in? :-)

73, Cecil, KG7BK, 00TC (Not speaking for Intel)

--
Intel, Corp.
5000 W. Chandler Blvd.
Chandler, AZ 85226

End of Ham-Ant Digest V94 #260
